

IN THE SPECIFICATION:

Please amend the specification as follows:

Please substitute the paragraph beginning at page 4, line 6, with the following.

-- According to a preferred embodiment of the present invention, the generation unit preferably includes a condition setting unit which sets an image display condition. --

Please substitute the paragraph beginning at page 4, line 19, with the following.

-- According to a preferred embodiment of the present invention, the software is preferably ~~described in~~ described in one of a mark language and a script language. --

Please substitute the paragraph beginning at page 6, line 3, with the following.

-- According to a preferred embodiment of the present invention, the apparatus further ~~comprising~~ comprises a reception unit which receives the control parameter from the exposure system. --

Please substitute the paragraph beginning at page 6, line 11, with the following.

-- According a preferred embodiment of the present invention, the apparatus further ~~comprising~~ comprises a transmitting unit which transmits a control parameter edited using the software to the exposure system. --

Please substitute the paragraph beginning at page 6, line 20, and ending on page 7, line 1, with the following.

-- According to a ~~forth~~ fourth aspect of the present invention, there is provided a method adapted to an information processing apparatus used for an exposure system, the method comprising steps of generating format information required to inform a user with respect to a control parameter used in the exposure system, based on the control parameter, and outputting the parameter information and the format information out of the apparatus. --

Please substitute the paragraph beginning at page 9, line 8, with the following.

-- Fig. 18 is a simplified view of the image display information (SVG (scalable vector graphics) text) of Figs. 17A and 17B; --

Please substitute the paragraph beginning at page 9, line 21, and ending on page 10, line 16, with the following.

-- Fig. 1 is a perspective view showing the outer appearance of a semiconductor exposure apparatus according to the first embodiment of the present invention. As shown in Fig. 1, the semiconductor exposure apparatus comprises a temperature-controlled chamber 101, which ~~control~~ controls the environmental temperature of the apparatus main body, an engineering work station (EWS) main body 106 arranged inside the chamber 101 and having a main body CPU 321 (see Fig. 3), which controls the apparatus main body, and a console unit 330 including an EWS display unit 102, which displays predetermined information of the apparatus, a monitor TV 105, which display image information obtained through an image sensing means in the apparatus main body, an operation panel 103 for inputting predetermined data to the apparatus, an EWS keyboard 104, and the like. Referring to Fig. 1, reference numeral 107 denotes an ON/OFF

switch; 108, an emergency stop switch; 109, various switches, a mouse, and the like; 110, an LAN communication cable; 111, an exhaust duct for removing heat from the console unit 330, and 112, an exhaust unit of the chamber. The semiconductor exposure apparatus main body is arranged inside the temperature-controlled chamber 101. --

Please substitute the paragraph beginning at page 10, line 17, with the following.

-- The EWS display unit 102 is a thin flat type one which uses EL, plasma, a liquid crystal, or the like. The EWS display unit 102 is set on the front surface of the temperature-controlled chamber 101 and is connected to the EWS main body 106 through the LAN communication cable 110. The operation panel 103, keyboard 104, monitor TV 105, and the like, are also arranged on the front surface of the temperature-controlled chamber 101 such that the same console operation as in the prior art can be performed on the front surface of the temperature-controlled chamber 101. --

Please substitute the paragraph beginning at page 14, line 11, and ending on page 15, line 7, with the following.

-- Fig. 4 is a diagram showing an example of the structure of a composite parameter file according to the present invention. As shown in Fig. 4, a parameter file 401 comprises a parameter information portion 402 which has parameter information for controlling the exposure apparatus and an image display information portion 403 which has image display information for displaying an image in a format adapted to a predetermined image display means on the basis of the parameter information. The parameter information portion 402 has the same contents as

those of parameter information in a conventional parameter file. The image display information portion 403 has image display information for displaying an image on a standard viewer such as an SVG (Scalable Vector Graphics) Viewer, a Web browser, which incorporates predetermined plug-ins, or the like. In this embodiment, the parameter file 401 will be referred to as a composite parameter file. Although a case has been exemplified wherein the composite parameter file 401 has the parameter information portion 402 and the image display information portion 403, the present invention is not limited to this. For example, the composite parameter file 401 may not include the parameter information portion 402. --

Please substitute the paragraph beginning at page 15, line 8, with the following.

-- Fig. 5 is a diagram showing another example of the structure of a composite parameter file 501 according to the present invention. Fig. 5 shows a case wherein parameter information portions 502 are incorporated in an image display information portion 503. The following description of this embodiment will exemplify the use of the composite parameter file 501 shown in Fig. 5. As in the case of Fig. 4, the image display information for displaying an image on a standard viewer such as an SVG viewer, a Web browser, which incorporates predetermined plug-ins, or the like. Each parameter information portion 502 has the same contents as those of parameter information in a conventional parameter file. The parameter information portions 502 are dispersely arranged in the image display information portion 503, as needed. --

Please substitute the paragraph beginning at page 16, line 13, and ending 17, line 9, with the following.

-- Each image display means 602 is an information processing apparatus (e.g., a personal computer) having communication means used for communicating with transmitting/receiving the composite parameter file 501 to/from the exposure system 601, the console unit 330, and/or the like, reads image display information compliant with a prescribed description method displays an image corresponding to the image display information (the composite parameter file 501). In the image display means 602 compliant with the prescribed description method, e.g., Internet Explorer (registered trademark) available from Microsoft (registered trademark) Corporation which incorporates an SVG viewer available from Adobe (registered trademark) Systems Incorporated as a plug-in can be employed. The image display means 602 reads the composite parameter file 501 and displays an image (information to be informed to a user with respect to a control parameter used in the exposure system 601.) In this case, the image is created on the basis of the information in the image display information portion 503 of the composite parameter file 501. Since the information in the parameter information portion 502 is incorporated as comments, descriptions, attributes of the image, and the like, it is not directly displayed as an image. --

Please substitute the paragraph beginning at page 17, line 10, and ending on page 18, line 6, with the following.

-- A case wherein the console unit 330 writes the composite parameter file 501 from the exposure system 601 will be described with reference to the flow chart of Fig. 8. The image display information portion 503 is written in the SVG (Scalable Vector Graphics) format as an XML (Extensible Markup Language) document, and a portion bounded by a pair of tags (e.g.,

<g> and </g>) is normally considered as one text. However, a text in this embodiment adopts a unit different from that of a normal XML document. Statements written at [[a]] one time, which correspond to one line in Figs. 10A and 10B (to be described later), or a statement of one line will be referred to as a test segment. In the following description, image display information includes a test segment which is used for parameter information and whose image is not displayed. Contents and their orders of the image display information portion 503 substantially depend on the values of parameters. To intelligibly explain a process of adding the parameter information portion 502 to the image display information portion 503, job parameters stored in the memory 332 shown in Fig. 3 are read into the memory of the console CPU 331, and a template image display information set serving as a template for creating an image is prepared as follows. --

Please substitute the paragraph beginning at page 24, line 8, and ending on page 26, line 5, with the following.

-- Figs. 10A and 10B show examples of the image display information portion 503 (SVG text) to be processed in this embodiment. Fig. 11 is a simplified view of the example of Figs. 10A and 10B. A brief description will be given with reference to Fig. 11. The description exemplifies a case wherein Internet Explorer (trademark), which incorporates an SVG viewer as a plug-in is employed as the image display means 602. Fig. 12 shows an image which the image display means 602 displays using the SVG text. Referring to Fig. 11, an entire portion 1101 of the SVG text has an XML declaration and a document type declaration. The portion 1102 bounded by tags <svg> and </svg> describes the main body of the image display information

portion 503. To distinguish between a name for a parameter and a name for SVG, character strings “job” are defined in the name space of a parameter name. If parameter names and SVG names do not share the same names, name spaces are unnecessary. The portion 1103 bounded by tags <desc> and </desc> is used to explain an SVG file. In this embodiment, a portion bounded by tags <param> and </param> has a general parameter which is not directly related to an image. The parameter ID designed by id and the value of each parameter are included in a portion bounded by tags <param> and </param>. In this example, the first parameter whose parameter id is P1_12345 has a value of 123.45. Although only three parameters are shown here, this portion can actually describe more parameters. A portion 1104 including a tag <path/> is used to create an image of a circular wafer. A portion 1105 is used to display the value of the diameter of the wafer. A portion 1006 is used for a shot layout to be drawn on the wafer and sample shots. A portion 1107 has definitions to be used later. A portion 1108 has a definition used to draw the shot layout; 110, a definition used to draw the sample shots. The portion 110 is used to draw the shot layout. A tag <use/> for drawing each shot has, e.g., the values of job parameters such as a row number, a column number, X- and Y-coordinates, a focus value, and an exposure amount as attributes. A portion 1111 is used to draw “Column”, “Row”, and their numbers. The portion 1112 is used to draw a sample shot whose id is GTILT. This sample shot is displayed only for one second upon pressing a button GTILT drawn using a portion 1114. The portion 1113 is used to draw a sample shot whose id is TPOC. This sample shot is also displayed only for one second upon pressing a button TPOC drawn using a portion 1115. A tag <use/> used to draw each shot of the portions 1112 and 1113 has the values of the job parameters for a row number and column number as attributes. --

Please substitute the paragraph beginning at page 27, line 14, with the following.

-- The first embodiment enables a processing apparatus other than an exposure apparatus to display the contents of a parameter file as an image. In addition to this, the second embodiment can edit parameters in the parameter file. A method of implementing this will be described as the second embodiment. The second embodiment is different from the first embodiment in a write operation of a composite parameter file and is identical to the first embodiment in a read operation of the composite parameter file. Since a processing method for the read operation is similar to that shown in the flow chart of Fig. 9, a file write process will be described. --

Please substitute the paragraph beginning at page 27, line 27, and ending on page 28, line 17, with the following.

-- Fig. 13 is a diagram showing an example of the structure of a composite parameter file according to the present invention. A composite parameter file 1301 includes a script portion 1302 in addition to the contents of the composite parameter file 401 of Fig. 4. A parameter information portion 402 has the same contents as those of parameter information in a conventional parameter file. An image display information portion 403 has image display information for displaying an image on a standard viewer such as an SVG Viewer, a Web browser, which incorporates predetermined plug-ins, or the like. The script portion 1302 has a program for editing the parameter information portion 402 or image display information portion 403. In Fig. 13, a case is exemplified wherein the composite parameter file 1301 is divided into

the parameter information portion 402, image display information portion 403, and script portion 1302. --

Please substitute the paragraph beginning at page 28, line 18, and ending on page 29, line 14, with the following.

-- Fig. 14 is a diagram showing another example of the structure of a composite parameter file 1401 according to the present invention. Fig. 14 shows a case wherein parameter information portions 502 and script portions 1402 are incorporated in an image display information portion 503. The following description of this embodiment will exemplify the use of the composite parameter file 1401 shown in Fig. 14. The image display information portion 503 has image display information for creating an image on a standard viewer such as an SVG viewer, or the like. Each parameter information portion 502 has the same contents as those of parameter information in a conventional parameter file. The script portion 1402 has a program for editing the parameter information portions 502 and image display information portion 503. The parameter information portions 502, each of which has the same contents as those of parameter information in a conventional parameter file, are dispersely arranged in the image display information portion 403, as needed. The composite parameter file 1401 is arranged in the image display information portion 503 so as to include the parameter information portions 502 and script portions 1402. --

Please substitute the paragraph beginning at page 29, line 15, and ending on page 31, line 2, with the following.

-- Fig. 15 is a conceptual view showing an outline of the process flow of the composite parameter file 1401. An exposure system 601 includes a semiconductor manufacturing apparatus, an apparatus system such as a job server which manages the composite parameter file 1401 including job parameters, a system which manages, e.g., job parameters by a Web server, or the like. A console unit 330 can write the composite parameter file 1401 from the exposure system 601. The processing sequence for this is shown in the flow chart of Fig. 16. The console unit 330 can also cause the exposure system 601 to read the composite parameter file 1401, and its processing sequence is shown in the flow chart of Fig. 9. Image display means 602 each reads the image display information portion 503 compliant with a prescribed description method and displays an image corresponding to a text in the image display information. The image display means 602 can execute a program in the script portion 1402 to implement functions of a parameter editor. That is, the image display means 602 can modify the composite parameter file 1401 or image display information portion 503 through the operator's operation or the like. As for a simple parameter which is not directly related to an image, such as one arranged in a portion 1803 (to be described later), the parameter name and value are displayed, and the value can be changed. This change requires basically the same arrangement as that required to edit parameters to be displayed as an image (to be described later), and a description thereof will be omitted. As the image display means 602, e.g., Internet Explorer (trademark) available from Microsoft Corporation, which incorporates an SVG viewer available from Adobe Systems Incorporated as a plug-in can be employed. The image display means 602 reads the composite parameter file 1401 and displays an image. In this case, the image is created on the basis of the information in the image display information portion 503 of the composite parameter file 1401. Since the

information in the parameter information portion 502 or script portion 1402 is incorporated as comments, descriptions, attributes of the image, and the like, it is not directly displayed as an image. --

Please substitute the paragraph beginning at page 33, line 12, and ending on page 35, line 25, with the following.

-- First, in step S1601, a part of the image display information portion 503 is loaded from the template image display information set stored in the memory 332 into the memory of the console CPU 331. In step S1602, it is checked whether the text segment in the part of the image display information portion 503 has a piece of parameter information. In examples of Figs. 17A, 17B and 18 (to be described later), parameters which are not directly related to an image are written in the portion 1803 bounded by tags <desc> and </desc>. A text block 1809 is used to create an image of a shot layout whose id is S1 and which includes an array of exposure shots. If the text segment in the part has a piece of parameter information, the flow advances to step S1603; otherwise, the flow advances to step S1605. In step S1603, a converter 612 of the console unit 330 converts the piece of parameter information, which is loaded from the text segment into the memory of the console CPU 33, into a format adapted to the image display means 602 on the basis of the job parameters for controlling the exposure apparatus stored in the memory 332. An adder 613 of the console unit 330 adds the parameter information portion 502 obtained by the conversion into the above-mentioned format to the part of the image display information portion 503. The parameter information portion 502 obtained by the conversion may have a tag indicative of parameter information like the portion 1803 or may have character

strings which have a plurality of pairs of a parameter ID and its value such as “PID:data” (neither is shown in the example of Fig. 17A or 17B) or an attribute (e.g., row=“2” and clm=“1”) such as ~~“1809”~~. “1809”. The parameter information portion 502 is not limited to a specified format, and any format can be adopted as far as the format complies with the display format of source image display information. In step S1604, it is checked whether the part of the image display information portion 503 has more pieces of parameter information to be added. If one or more pieces of parameter information remain to be added, the flow returns to step S1603; otherwise, the flow advances to step S1605. In step S1605, the part of the image display information portion 503 is written. The part of the image display information portion 503 is prepared in the memory of the console CPU 331, and at this time, it may or may not have parameter statements. When the write operation of the part of the image display information portion 503 ends, the flow advances to step S1606. In step S1606, it is checked whether the part of the image display information portion 503 written in step S1606 has a tag <script> indicative of a script area. If the part does not have a <script> tag, the flow advances to step S1609; otherwise, the flow advances to step S1607. In step S1607, predetermined scripts prepared in the memory of the console CPU 331 ~~is~~ are written. Then, in step S1608, a tag </script> which indicates the end of the scripts is written. The flow advances to step S1609. In step S1609, it is checked whether the image display information of interest has the final part of the image display information set. In the example of Fig. 18, </svg> in a portion 1802 indicates the end of text. If YES in step S1609, the process ends; otherwise, the flow starts again from the step S1601. In this manner, the composite parameter file 1401 is so created as to include as many pieces of parameter information as needed

for the exposure system 601 and be capable of displaying an image by the image display means 602. --

Please substitute the paragraph beginning at page 35, line 26, and ending on page 36, line 17, with the following.

-- Figs. 17A and 17B show examples of image display information (SVG text) to be processed in this embodiment. Fig. 18 is a simplified view of the examples of Figs. 17A and 17B. A brief description will be given with reference to Fig. 18. the description exemplifies a case wherein Internet Explorer (registered trademark), which incorporates an SVG viewer as a plug-in is employed as the image display means 602. An image which the image display means 602 displays using the SVG text corresponds to an image obtained by removing the buttons GTILT and TPOC from the image in Fig. 12. An entire portion 1801 of the SVG text includes an XML declaration and a document type declaration. A portion `<?AdobeSVGViewer save=` “snapshot”?>” makes it possible to save the image display information portion 503, whose contents are changed by an editor function of this embodiment, at the time of execution of a command “Save SVG As . . .” which is displayed by right-clicking on the displayed image. --

Please substitute the paragraph beginning at page 37, line 25, and ending on page 39, line 5, with the following.

-- The exposure system, which serves as the information processing apparatus of this embodiment, is not limited to have the arrangement of this embodiment, as described in the preceding paragraph. The exposure system may also be applied to a semiconductor

manufacturing apparatus, a job server which manages jobs, a Web server which is accessible from, e.g, the Internet, an intranet, or the like. The exposure system can be applied to any apparatus as far as the apparatus manages parameters for controlling an exposure apparatus. If the information processing apparatus according to this embodiment is applied to a Web server, it can save a composite parameter file to the Web server and read it from the Web server through a network (e.g., by specifying the address of the Web server, such as “~~http://semi.sample.org/job/sample.svg~~”) server. The save operation of the parameter file involves sending and saving it to the Web server. This differs from the examples of Figs. 17A and 17B. To send the parameter file to the Web server, an image of a button Save is created, and the following script is written as an event process which is executed upon pressing the button:

```
var text = printNode ( svgDocument );
```

```
post URL( “http://semi.sample.org/job/svgsave.cgi?sample.svg”, (“URL (Uniform Resource Locator) about the Web server,” text, cb);
```

where cb represents a callback routine for receiving a status as a result of sending a composite parameter file to the Web server. The Web server may receive the sent composite parameter file using a CGI (Common Gateway Interface) program (e.g., `svgsave.cgi`) and execute the save operation. In addition, the exposure system may include a console unit. --

Please substitute the paragraph beginning at page 39, line 6, and ending on page 40, line 5, with the following.

-- Although, in this embodiment, a composite parameter file is stored in a storage console unit connected to an apparatus or system, the present invention is not limited to this. The

composite parameter file may be stored in, e.g., an external connectable storage or a removable storage medium. The composite parameter file may be an abstract file formed by collecting related data and may not be stored in a medium. For example, the composite parameter file may be a collection of data to be communicated or may indicate the location of parameters. Although, in this embodiment, one SVG file includes the entire text, the present invention may use a plurality of files. For example, an HTML file may have the addresses of an SVG file, XML file, and the like. A script included in a program for editing the parameter information portion 402 or image display information portion 403 can be written using Java Script (registered trademark) (ECMA (European Computer Manufacturer's Association) Script), or the like. The present invention, however, is not limited to this. For example, a program language such as Java (registered trademark), C#, or the like may be employed in accordance with the image display means 602. Scripts or programs ~~is~~ are not limited to ~~comprise~~ character strings easily understandable to the users. For example, scripts or programs may be encoded, compiled, converted into an intermediate language, or compressed. --

Please substitute the paragraph beginning at page 40, line 14, and ending on page 41, line 21, with the following.

-- The second embodiment makes it possible to edit parameters in a parameter file. The editing operation may also be performed by voice. A method of implementing this will be described as the third embodiment. The third embodiment is identical to the first embodiment in a read operation of a composite parameter file, and a processing method for the read operation is similar to that shown in the flow chart of Fig. 9. The third embodiment is different from the

second embodiment in a write operation of a composite parameter file, and its flow is slightly different from that shown in the flow chart of Fig. 16. The flow of the third embodiment is obtained by replacing a part of the description of step S1601 “a part of image display information is loaded from the template image display information set into the memory of the console CPU 331” with “a part of image display information is loaded from the template image display information set which has a text segment written in a voice-capable description language into the memory of the console CPU 331 by voice response operation of a parameter editing function.”

~~Similarly~~ Similar to the second embodiment, the number of lines of a text for displaying an image, which has a text segment written in a voice-capable description language, is increased/decreased on the basis of the values of parameters (e.g., the number of shots), or the text is arranged to write, at a subsequent time, actual numerical values and character strings in its variable portions on the basis of the values of parameters (e.g., shot size and position of a shot). With this operation, the template image display information set is prepared in advance so as to serve as a template for creating an image operable by voice and have a text segment written in a voice-capable description language (e.g., Voice XML (trademark)). --

Please substitute the paragraph beginning at page 41, line 22, and ending on page 43, line 10, with the following.

-- Fig. 19 is a conceptual view showing an outline of the process flow of a composite parameter file 1901. An exposure system 601 includes a semiconductor manufacturing apparatus, an apparatus system such as a job server which manages the composite parameter file 1901 having job parameters, a system which manages, e.g., job parameters by a Web server, or

the like. A console unit 330 can write the composite parameter file 1901 from the exposure system 601. The processing sequence for this is obtained by slightly modifying the flow chart of Fig. 16. The console unit 330 can also cause the exposure system 601 to read the composite parameter file 1901, and its processing sequence is shown in the flow chart of Fig. 9 (partial modification is necessary). Image display means 602 each reads an image display information portion 503 compliant with a prescribed description method and displays an image corresponding to the image display information portion 503. The image display means 602 can execute a program in the script portion 1402 to implement functions of a parameter editor. That is, the image display means 602 can modify the parameter information portion 502 or image display information portion 503, through a mouse operation, a touch panel operation, a keyboard operation, a voice operation in accordance with a voice response description portion 1902, or the like, of the operator. As the image display means 602, e.g., Internet Explorer (trademark) available from Microsoft Corporation which incorporates SVG viewer available from Adobe Systems Incorporated as a plug-in can be employed. The image display means 602 reads the composite parameter file 1901 and displays an image. In this case, the image is created on the basis of the information in the image display information portion 503 of the composite parameter file 1901. Since the information in the parameter information portion 502 is incorporated as comments, descriptions, attributes of the image, and the like, it is not directly displayed as an image. Also, the information in the script portion 1402 or voice response description portion 1902 is not directly displayed as an image. A process of writing the composite parameter file 1901 from the exposure system 601 is the same as that shown in the flow chart of Fig. 16, and a description of the steps will be omitted. --

Please substitute the paragraph beginning at page 44, line 25, and ending on page 45, line 12, with the following.

-- In step 3 (wafer manufacture), a wafer (substrate) is manufactured by using a material such as silicon. In step 4 (wafer process), called a preprocess, an actual circuit is formed on the wafer by lithography using the prepared mask and wafer. Step 5 (assembly), called a post-process, is the step of forming a semiconductor chip by using the wafer formed in step 4, and includes an assembly process (dicing and bonding) and a packaging process (chip encapsulation). In step 6 (inspection), the semiconductor device manufactured in step 5 undergoes inspections, such as an operation confirmation test and a durability test of the semiconductor device manufactured in step 5. After these steps, the semiconductor device is completed and shipped (step 7). --